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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/036,794 | 11/07/2001 | Yeshik Shin | 594728114US | 5404 |

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EXAMINER

KERVEROS, JAMES C

| ART UNIT | PAPER NUMBER |
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2133

8

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/036,794

Applicant(s)

SHIN ET AL.

Examiner

James C Kerveros

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☒ Claim(s) 9 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-33 are pending and are presently being under examination.

Specification

2. The abstract of the disclosure is objected to because it lacks proper language and format. On lines 8 and 10, the term "may" should be deleted from the abstract. Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claims 9 and 21 are objected to because of the following informalities:
Claim 9, on line 2, "to transmits" should be changed to "to transmit" due to a typo.
Claim 21, on line 4, "a identification" should be "an identification".
Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "detecting an error during the transmission" recited in claims 1, 6, 10, 16, 17, 21, 28, 29, 30, renders the claim indefinite, because it fails to clearly define the specific time and location of error detection, with respect to the communications device,

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since a transmission error normally occurs in the communication link during the transmission time. Errors are normally detected in a transmitting or a receiving device upon receiving of data in the respective device. However, for examination purpose, the Examiner interprets the error to be detected during the data reception by the transmitting or receiving device. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Haartsen (US 5699367), issued: December 16, 1997.

Regarding independent Claims 1, 10, 21, 30 and dependent claims 6, 13, 16, 17, 18, 19, 28, 29, 33, Haartsen discloses a method and apparatus for data transmission over a chain of cascaded links that makes use of packet retransmission for error correction, FIGS. 1-5, comprising:

Receiving a request, such as transaction Automatic Repeat Query (ARQ) using (local ARQ protocol) at a switch located in a (RELAY STATION) from an initiator communications device (END STATION A), by applying a distributed local ARQ protocol over the nonsensitive link coupled between the (END STATION A) and the

(RELAY STATION), as shown in FIG. 4, and transmitting the transaction request (local ARQ protocol) through the network (RELAY STATION) to a responding communications device (END STATION B), by applying a distributed local ARQ protocol over the sensitive link coupled between the (RELAY STATION) and the (END STATION A), as shown in FIG. 4.

Receiving a transaction response [acknowledgement signal (ACK)] at a switch located in (RELAY STATION) from the responding communications device (END STATION B) and transmitting the transaction response (ACK) through the network (RELAY STATION) to the initiator communications device (END STATION A). In this case, the destination (END STATION B) checks the transmitted packet for correctness and either sends an acknowledgement signal (ACK) to the initiator communications device (END STATION A), with the packet number or a non-acknowledgement signal (NAK) in case the packet has been correctly or incorrectly received, respectively, (Col. 3, lines 45-50).

And upon the (END STATION B) detecting an error, such as a cyclic-redundancy-check CRC or forward-error-correction FEC in the data packet, during the transmission of the transaction response (ACK), then the (END STATION B) terminates the transmission and transmits an error message, such as a non-acknowledgement signal (NAK) to the initiator communications device (END STATION A) in case the packet has been incorrectly received by the (END STATION B).

Regarding independent Claims 10, 21, 30, in addition to the common limitations as applied to claim 1, Haartsen discloses identifying the communications device such

as (END STATION A) that initiated the transmission of the data packets having error detection coding (D) and packet number (N). In this case, (END STATION A) acts as the destination and checks the local error detection coding. Once the packet has been correctly received, the destination acknowledges receipt of the packet by acknowledging the end-to-end packet numbering to the source (END STATION A), (col. 3, lines 5-15).

Regarding Claims 2, 3, 4, 5, 20, Haartsen discloses an initiator communications device (END STATION A) responsible for handling the error, when a non-acknowledgement signal is produced, then the source (END STATION A) responds with a retransmission of the incorrect packet. If an acknowledgement signal is not received within the time-out period, the source (END STATION A) automatically retransmits the packet using the Automatic Repeat Query (ARQ) or Automatic Repeat Request which is more secure than the use of non-acknowledgement signals. (Col. 3, lines 40-45). The initiator communications device (END STATION A) then forwards error message (NAK) to an application layer, such as a portable data device such as a laptop, PDA, FIG. 2.

Regarding Claims 7, 8, 14, 23, 25, 26, Haartsen discloses an initiator communications device, (END STATION A), a responding communications device (END STATION B) and a switch located in (RELAY STATION), which are part of a storage area network having storage capacity for storing packet data information for transmission over cascaded links, where the responding communications device (END

STATION B) is a data store device for storing data information, as designated by the packet storage boxes in FIG. 4.

Regarding Claim 9, Haartsen discloses a switch located in (RELAY STATION) upon receiving the error message, such as a non-acknowledgement signal (NAK) by (END STATION B), which then terminates the transmission and transmits the error message (NAK) to (END STATION A).

Regarding Claims 11, 22, 31, Haartsen discloses identifying the communications device such as (END STATION A) that initiated the transmission of the data packets, which have error detection coding (D) and packet number (N). In this case, (END STATION A) acts as the destination and checks the local error detection coding. Once the packet has been correctly received, the destination acknowledges receipt of the packet by acknowledging the end-to-end packet numbering to the source (END STATION A). Further, the identifying step includes retrieving an address such as packet number (N) corresponding to the communications device (END STATION A), (col. 3, lines 5-15).

Regarding Claims 12, 15, 24, 27, 32, Haartsen discloses a communications device (END STATION A) that transmitted the data to the switch located in (RELAY STATION) is not notified of the error. The (END STATION A) is notified of the error, only when (END STATION B) detects an error and transmits the error message (NAK) to (END STATION A), or when (END STATION B) checks the transmitted packet for correctness and sends an acknowledgement signal (ACK) to (END STATION A) indicating no error.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James C Kerveros whose telephone number is (703) 305-1081. The examiner can normally be reached on 9:00 AM TO 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (703) 305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

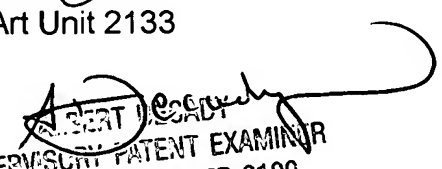
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

U.S. PATENT OFFICE
Examiner's Fax: (703) 746-4461
Email: james.kerveros@uspto.gov

Date: 26 April 2004
Office Action: Non-Final Rejection

By: _____

James C Kerveros
Examiner
Art Unit 2133


ALBERT DECADY
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